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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| ART UNIT | PAPER NUMBER |
|---|---|
| 2857 | |

DATE MAILED: 06/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/601,399 | SOLOMITA ET AL. | |
| | Examiner | Art Unit | |
| | Jeffrey R. West | 2857 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *11 March 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *11 March 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-5 and 7-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,538,577 to Ehrke et al. in view of U.S. Patent No. 6,622,097 to Hunter.

Ehrke discloses an electronic electric meter for networked meter reading comprising a communication network accessible by a utility (column 6, lines 38-39), a gateway connecting to the communications network (column 6, lines 40-41), including a microcontroller, inherently with an operating system, (column 10, lines 1-5) at least one application transmitting (column 10, lines 50-52), receiving (column 10, lines 38-39), and processing (column 10, lines 44-49) data through a utility consumption network (column 9, lines 25-29), a device in communication with the utility consumption network, the device consuming units of the resource provided by the utility (column 5, lines 26-34), and an adapter in communication with the device translating data sent to and from the device on the communications network into a protocol for communication with the gateway (column 5, lines 38-46).

Ehrke discloses that the network comprises a utility meter configured for automatic reading (column 6, lines 32-34) and a utility meter adapter in

communication with the utility meter translating a signal containing usage data from the utility meter and transmitting the usage data to the gateway (column 6, lines 35-48).

Ehrke discloses that the gateway is connected to a wide area network to provide access by the utility (column 8, lines 3-6).

Ehrke discloses a computing platform (i.e. data requester of the utility) operatively connected to the wide area network, the gateway configured to send and receive data through the wide area network from the computing platform (column 7, line 56 to column 8, line 6).

Ehrke discloses that the resource provided by the utility is at least one of electric, water, and gas (column 6, line 36).

Ehrke further discloses a method for managing a network comprising receiving a demand-response event requested over a wide area network from the utility to a gateway (column 7, lines 1-8) in communication with a local network (column 7, lines 9-20), forwarding the demand-response event request through the local network to a translator for the operational resource consuming device (column 7, lines 9-20), translating the request into a native format for the operational resource consuming device (column 7, lines 15-20), receiving and storing post demand-response event data form the operational resource consuming device (column 7, lines 20-22 and 56-57 and column 9, lines 30-38), and forwarding the post demand-response event data through the wide area network to the utility (column 7, lines 25-33), the utility

analyzing the post demand-response event data (column 1, lines 21-23 and column 9, lines 30-38).

Ehrke discloses translating usage data from a utility meter into a protocol for communication with the gateway (column 7, lines 16-22) and transmitting the usage data periodically through the wide area network for the utility (column 7, lines 34-55).

As noted above, the invention of Ehrke teaches many of the features of the claimed invention and while Ehrke does teach a gateway for connection to the utility and meter for transmitting usage data there-between, Ehrke does not specify that the gateway be a mobile device for allowing the user to control the meter based on the usage data for cost efficiency. Ehrke also does not specify that the control be for controlling a thermostat as part of a climate-control device.

Hunter teaches a method and apparatus for reading and controlling electric power consumption comprising a gateway control device that is portable (column 5, lines 17-23 and column 7, lines 30-35), includes a graphical user interface (column 6, lines 50-64) and a user interface control mechanism for selecting portions of the user interface (i.e. mouse pointer) (Figure 6 and column 7, lines 30-35) in order to initiate a state change of the operational resource consuming device (column 7, lines 56-63) for cost efficiency (column 8, lines 18-26). Hunter teaches that the control device controls the consumption of units of resource provided by a utility (column 7, lines 64-65). Hunter also teaches that the device is a thermostat for monitoring ambient temperature in communication with a climate control unit in communication with a communication network (column 7, line 64 to column 8, line 7) whereby the

thermostat transmits temperature data to the gateway (i.e. end-user interface) (column 8, lines 14-16 and 34-42) and receives command signals from the gateway to the climate control unit to heat or cool the ambient airspace by receiving operational data from the resource consuming device comparing the data to a rules set (i.e. baseline levels) and transmitting a state change command to the resource consuming device when a rule is satisfied (column 7, line 64 to column 8, line 7).

It would have been obvious to one having ordinary skill in the art to modify the invention of Ehrke to include specifying that the gateway is a mobile device for allowing the user to control the metered utility based on the usage data for cost efficiency, as taught by Hunter, because as suggested by Hunter, the combination would have reduced the burden of a user by allowing the user to access information at any convenient location as well as control the utility consuming devices in order to obtain desired settings while maximizing cost effectiveness and reducing utility waste through power conservation of a common utility consuming device, such as a climate control device (column 8, lines 8-16 and 34-42).

3. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ehrke in view of Hunter and further in view of U.S. Patent No. 5,696,695 to Ehlers et al.

As noted above, the invention of Ehrke and Hunter teaches many of the features of the claimed invention and while the combination does teach providing a graphical user interface for control of a consumption device, the combination does not specifically provide a menu and button driven interface.

Ehlers teaches a system for rate-related control of electrical loads including a menu and button driven graphical user interface (column 14, lines 38-56 and Figures 11-15).

It would have been obvious to one having ordinary skill in the art to modify the invention of Ehrke and Hunter to specifically provide a menu and button driven interface, as taught by Ehlers, because Ehlers suggests a common user-friendly interface that would have allowed the user to control desired devices without requiring complex programming knowledge (column 14, lines 38-56).

***Response to Arguments***

4. Applicant's arguments filed March 11, 2005, have been fully considered but they are not persuasive.

Applicant first argues that Ehrke does not "teach or suggest, among other things 'a communications network accessible by the utility; a gateway connecting to the communications network, including an operating system.' There is no teaching or suggestion of a 'user interface; at least one application transmitting and receiving data through the utility consumption control network, processing the data and providing the data to the user interface [and] a user interface control mechanism selecting portions of the user interface' as particularly disclosed and claimed by Applicants."

The Examiner maintains that Ehrke does disclose a communications network accessible by a utility, a gateway connecting to the communications network

(column 6, lines 35-41, "In a preferred embodiment of the invention, FIGS. 5 and 6, the electric meter 10 communicates over a local area network (LAN) 74 to a gateway node 72 which transmits the commodity data from the electric meter 10 to a utility 76 over a fixed common carrier wide area network (WAN) 78. The gateway node 72 provides the end to end communication links form the meter 10 to the utility 76."), including a microcontroller, inherently with an operating system, (column 10, lines 1-5, "Initialization microcontroller 98 controls all node functions including programming spread spectrum processor 102, RF channel selection in frequency synthesizer 104 of RF transceiver 94, transmit/receive switching, and detecting failures in WAN interface module 96.") as well as at least one application transmitting (column 10, lines 50-54, "During the transmit mode of gateway node 72, initialization microcontroller 98 monitors the data line to detect ideal conditions, start bits, and stop bits. This is done to prevent gateway node 24 from continuously transmitting meaningless information"), receiving (column 10, lines 38-39, "For receiving data, gateway node 72 monitors the electric meter 10"), and processing data (column 10, lines 44-49, "Gateway node 72 must know how many bytes of data it is expecting to see and count them as they come in. When the proper number of bytes is received, reception is deemed complete and the message is processed.").

With respect to the teaching of a user interface and a user interface control mechanism selecting portions of the user interface, the invention of Ehrke is not relied upon to teach these features as these features are taught by Hunter.

Applicant also argues that, even as construed by the Examiner, Ehrke "does not teach or suggest 'a device in communication with the utility consumption control network, the device consuming units of the resource provided by the utility:' as in Claim 1. And Ehrke nowhere discloses a combination including 'an adapter in communication with the device, translating data sent to and from the device on the communications network into a protocol for communication with the gateway' as particularly disclosed and claimed by Applicants."

The Examiner maintains that the invention of Ehrke discloses a device in communication with the utility consumption network, the device consuming units of the resource provided by the utility (i.e. a device consuming units of electricity that is measured by the meter) (column 5, lines 26-34, "The program ROM 59 contains customer specific and site specific variables that may be important for calculating electricity usage."), and an adapter in communication with the device translating data sent to and from the device on the communications network into a protocol for communication with the gateway (i.e. an adapter for receiving the resource consuming data and translating the data for communication over the communications network to the gateway) (column 5, lines 38-46, "Electric meter 10 is able to communicate commodity utilization data and power quality information to a utility over a local area network (LAN) or a wide area network (WAN). A radio frequency (RF) communication section within the electric meter 10 is comprised by a communication microcontroller and a spread spectrum processor chip 58 and an RF

transceiver 60. An antenna 62 is coupled to the RF transceiver 60 for transmitting and receiving RF spread spectrum signals.").

Applicant then argues that "the cited portions of Hunter, however, fail to teach or suggest 'a communications network accessible by the utility; a gateway connecting to the communications network, including, an operating system; a user interface; at least one application transmitting and receiving data through the utility consumption control network; processing the data and providing the data to the user interface; a user interface control mechanism selecting portions of the user interface' as particularly claimed. Again, there is no teaching or suggestion of 'a device in communication with the utility consumption control network, the device consuming units of the resource provided by the utility' in combination with 'an adapter in communication with the device, translating data sent to and from the device on the communications network into a protocol for communication with the gateway' as Applicants particularly disclose and claim."

As noted above, these particular features are disclosed by the invention of Ehrke and therefore Applicants arguments are considered to be moot, with the exception of the teaching of a user interface which is discussed below.

Applicant then argues that Ehrke does "not teach or suggest 'receiving a demand-response event request over a wide area network from the utility to a gateway in communication with a local network' and 'forwarding the demand-

response event request through the local network to a translator for the operational resource consuming device' as particularly claimed. There is no teaching or suggestion of 'translating the request into a native format for the operational resource consuming device' as Applicants specifically claim in Claim 12."

The Examiner maintains that Ehrke discloses receiving a demand-response event requested over a wide area network from the utility to a gateway (i.e. the utility transmits a demand request over a WAN to the gateway) (column 7, lines 1-8, FIG. 9A is a detailed functional diagram of the WAN handler 84 of FIG. 8. In a typical communication episode, the utility 76 may initiate a request for data from the electric meter 10 by sending a data stream over the WAN 78. The WAN handler 84 of the gateway node 72 receives the WAN data stream, creates a WAN message, verifies the utility ID of the sender from the data stores 86 and routes the WAN message to the message dispatcher 80 in the gateway node.") in communication with a local network (i.e. LAN), forwarding the demand-response event request through the local network to a translator for the operational resource consuming device and translating (i.e. converting) the request into a native format for the operational resource consuming device (column 7, lines 9-20, "Referring now to FIG. 9B, the message dispatcher 80 receives the WAN message from the WAN handler 84 and determines the request from the utility 76. The message dispatcher 80 determines that the end recipient or target is the electronic meter 10. The message dispatcher 80 then verifies the meter ID from the data stores 86, creates an RF message and routes the RF message to the RF handler 82. Referring now to FIG. 9C, the RF

handler 82 receives the RF message from the message dispatcher 80, selects a proper RF channel, converts the RF message to an RF data stream, sends the RF data stream to the electric meter 10 over the LAN 74 and waits for a response.").

Applicant then argues that Ehrke does "not teach or suggest 'receiving and storing post-demand response event data from the operational resource consuming device' and 'forwarding the post demand-response event data through the wide area network to the utility' as particularly claimed by Applicants. Again, there is no mention of 'the utility analyzing the post demand-response event data to maximize efficiency and cost savings by adjusting output of the resource' as Applicants claim in claim 12."

The Examiner maintains that Ehrke discloses receiving and storing post demand-response event data from the operational resource consuming device (column 7, lines 20-22 and 56-57 and column 9, lines 30-38, "The electric meter 10 then responds by sending an RF data stream over the LAN to the RF handler 82 of the gateway node 72", "Occasionally, the utility 76 may request data that is stored within the gateway node's memory", and "The gateway node 72 receives data requests from the utility, interrogates the meter and forwards commodity usage information, as well as power quality information, over the WAN 78 to the utility 76. The gateway node 72 exchanges data with certain, predetermined, meters for which it is responsible, and "listens" for signals from those meters. The gateway node 72 does not store data for extended periods, thus minimizing security risks. The gateway

node's RF communication range is typically one mile."), and forwarding the post demand-response event data through the wide area network to the utility (column 7, lines 25-33, "As shown in FIG. 15B, the message dispatcher 80 receives the RF message, determines the target utility for response from the data stores 86, creates a WAN message and routes the WAN message to the WAN handler 84. The WAN handler 84 receives the WAN message from the message dispatcher 80, converts the WAN message to a WAN data stream and sends the WAN data stream to the utility 76 over the fixed common carrier WAN 78, as shown in FIG. 15A to complete the communication episode.")

The feature for analyzing the post demand-response event data to maximize efficiency and cost savings by adjusting output of the resource is not indicated as being taught by Ehrke, but is taught by the invention of Hunter, as described below.

Applicant then agues that "Hunter merely discloses a network for remote controlling appliances such as lights, etc. (Figs. 6, 7 and 8). Applicants submit that the cited portions of Hunter, however, fail to teach or suggest 'receiving a demand-response event request over a wide area network from the utility to a gateway in communication with a local network' and 'forwarding the demand-response event request through the local network to a translator for the operational resource consuming device' as particularly claimed. There is no teaching or suggestion of 'translating the request into a native format for the operational resource consuming device' as Applicants specifically claim in Claim 12. Hunter fails to disclose 'receiving

and storing post-demand response event data from the operational resource consuming device' and 'forwarding the post demand-response event data through the wide area network to the utility.' Furthermore, there is no teaching in Hunter of 'the utility analyzing the post demand-response event data to maximize efficiency and cost savings by adjusting output of the resources' as claimed in Claim 12."

As noted above, except for the feature of analyzing data to maximize efficiency and cost savings by adjusting output of the resources, these particular features are disclosed by the invention of Ehrke and therefore Applicants arguments are considered to be moot.

The Examiner also maintains that the invention of Hunter teaches this feature specifically by including a graphical user interface (column 6, lines 50-64) and a user interface control mechanism for selecting portions of the user interface (i.e. mouse pointer) (Figure 6 and column 7, lines 30-35) in order to initiate a state change of the operational resource consuming device (column 7, lines 56-63, "If the forecast indicates that the usage will exceed the baseline level the consumer may control the power usage of end-use devices from the computer 110 to fall below this requirement, especially during power crisis situations. For example, the end-user may turn off unnecessary lights or decrease the length of time certain devices will run such as a dryer or a HVAC system from the computer 110.") for cost efficiency (column 8, lines 18-26, "using the interface 602 provided by the software stored on the computer 110, the end-user may also determine an optimization schedule for running the devices 702. The end-user may obtain data such as cost per hour

device used or cost/cycle (washing machine). This may help determine whether the device is properly running as efficient as intended by the manufacturer. Also based on this information, the end-user may program or choose from created device-operating schedules to maximize cost effectiveness and power conservation.").

Applicant also argues that "The Examiner did not specify whether or which portions of Ehrke or Hunter are relied upon in rejecting Claim 17. However, Claim 17 contains limitations similar to those in Claims 1 and 12, and Applicants therefore submit that Claim 17 is patentable over the cited references for reasons previously described."

The Examiner asserts, that as noted above, all of the features of claims 1 and 12, and similarly claim 17, are specifically taught by the combination of Ehrke and Hunter.

***Conclusion***

5. The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure:

U.S. Patent No. 6,487,457 to Hull et al. teaches a database for a remotely accessible building information system.

U.S. Patent Application Publication No. 2003/0009401 to Ellis teaches a computerized utility cost estimation method and system.

U.S. Patent No. 6,751,563 to Spanier et al. teaches an electronic power meter.

U.S. Patent No. 5,818,725 to McNamara et al. teaches a system for utility demand monitoring and control.

Gulf Power Company Conservation Plan teaches a system for remote customer control of electricity consumption devices of heating and cooling systems.

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey R. West whose telephone number is (571)272-2226. The examiner can normally be reached on Monday through Friday, 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc S. Hoff can be reached on (571)272-2216. The fax phone number

for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

jrw
May 21, 2005

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